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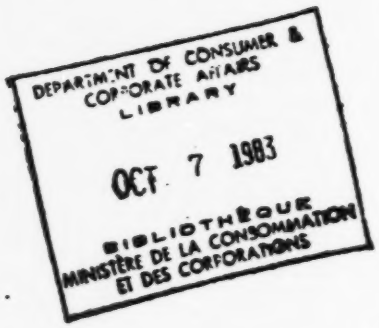
THE INDUSTRIAL STRATEGY DEBATE:

COMPETITION POLICY IMPLICATIONS



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SUMMARY

A review of the literature relating to industrial strategy indicates a lack of understanding and recognition of the interrelationship between industrial strategy and competition policy. This paper draws attention to the role of competition policy within the public economic policy framework, and the need to ensure that policies to alter the structure and performance of Canadian industry do not have adverse consequences on competitive conditions and efficiency in the domestic economy.

In a broad sense industrial strategy involves strategic planning and government initiatives. In this paper, the term is defined more specifically to refer to a comprehensive and consistent set of policies and/or programs to stimulate structural change and to deal with market rigidities and/or market failures, for the purpose of improving the performance of the domestic economy and the international competitive position of Canadian secondary manufacturing.

It is argued that the nature of the interrelationship between competition policy and industrial strategy implies that there is both a need and opportunity to co-ordinate these policy areas to ensure harmony and consistency. The prime objective of competition policy in Canada is to promote the efficient use and allocation of resources. This means that the objectives and the administration of competition policy are directly relevant to the realization of efficiency related goals of industrial strategy. To the extent that industrial strategy is aimed at promoting socio-political goals not amenable to competitive solutions, assessing the competition policy implications is an important part of resolving potential conflicts among strategic objectives and developing a co-ordinated set of government priorities and policy instruments. In addition, the application of the instruments of industrial strategy can have major implications for the administration and effectiveness of competition policy. Structural policies that reduce rivalry, increase potential market power and/or contribute to restrictive trade practices, can have an adverse impact on efficiency and competitive conditions in the domestic economy. As planning directs more decisions, the scope and significance of the market mechanism is reduced.

Recommendations for adoption of an industrial strategy are based on the view that co-ordinated government policy initiatives are required to deal with conditions undermining the development potential of Canadian industry. Although proposed solutions often differ, a review of the literature indicates common ground concerning problem areas and some underlying characteristics of the Canadian economy. The debate arises from ideological differences and different assessments of why existing market conditions prevent or retard economic development. Two broad orientations can be identified, based on distinct choices in primary policy instruments. One approach favours market oriented solutions, while the other favours increased direct government intervention. Although

it is recognized that these two broad orientations are not mutually exclusive, and that there are dissenting views on both sides, this framework was chosen because it highlights an important feature of the literature, and is useful for reviewing the uneven treatment which competition policy has received.

The objectives and administration of competition policy are important to both approaches to industrial strategy. To be effective, both market-oriented and intervention-oriented industrial strategies require incentive and control mechanisms to stimulate efficiency and to protect the public interest. If market forces and competition policy are not used, or if they are not strong enough to fulfill this role, then some other safeguard mechanisms must be used.

An examination of the competition policy implications of these two broad approaches and selected issues in the debate indicates that the choice of instruments of industrial strategy can have major implications for the administration and effectiveness of present and proposed Combines legislation. By emphasizing trade liberalization and general policy measures aimed at strengthening competitive market forces, the market-oriented approach tends to complement Canadian competition policy. On the other hand, the nature and application of the discretionary policy instruments emphasized by these advocating an interventionist-oriented industrial strategy, could be expected to place an increased burden on competition policy to ensure that these policies, aimed at altering the structure and performance of Canadian industries, do not contribute to restrictive trade practices and the abuse of domestic market power.

This review of the debate, and some available empirical evidence, points out a number of policy dilemmas relevant to both industrial strategy and competition policy. In the case of the rationalization of production, there is potential conflict between efficiency in the use and allocation of resources and increased concentration of power in the domestic market. In the case of technology and innovation, there is a dilemma between the incentives that stimulate innovation and the potential market power arising from successful innovations. In the case of foreign direct investment, there is a problem of assessing and weighing positive and negative effects. Competition policy in Canada attempts to deal with some aspects of these three dilemmas, however the optimal resolution of these problems is important to both competition policy and the development of an effective industrial strategy.

The examination of the interrelationship between industrial strategy and competition policy suggests that the development of an integrated public policy framework requires the resolution of several key questions:

1) What are the appropriate instruments for

industrial strategy?

2) To what extent can competition policy promote efficiency in the domestic market?

3) To what extent should issues of economic development be part of competition policy, and to what extent should these issues be dealt with elsewhere in the economic policy framework?

So far, most of the debate has been centred around the first question. However, the other two questions are linked directly to the formulation of an industrial strategy within the context of the public economic policy framework. Although it is not the objective of this paper to provide answers to these questions, the discussion does indicate that the consideration of all three is important to the development of an effective industrial strategy.

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INTRODUCTION:

Policy choices related to the economic development of Canada have been subjects of concern since confederation. In the 1870's, the first National Policy was designed to foster industrial growth by reducing import competition via tariff protection and by encouraging east- west trade in Canada. In recent years there has been a renewed interest in the design and implementation of an appropriate industrial strategy. During the 1960's and 1970's, publications by A.E. Safarian (1966,1969, 1979), Herb Gray (1972), R.J. Wonnacott (1975), D. Daly (1976, 1979), and others, stimulated discussions of the nature and the causes of problems impeding Canadian industrial economic development. The 1975 report, Looking Outward,[1] focused on trade related issues and established the Economic Council of Canada as a principal contributor to these discussions. In 1976, the Science Council of Canada formed the Industrial Policies Committee to examine the declining technological capability and the deterioration of the international competitive position of secondary manufacturing in Canada. This Committee initiated and published a number of influencial studies, emphasizing the problem of foreign control and the importance of technological sovereignty.[2] Interest in the issues of industrial strategy is also reflected in recent publications and comments by prominent Canadian research institutes,[3] as well as in public statements and discussion papers released by representatives of the business and financial communities.[4]

A review of the literature indicates that a broad range of policies and programs have been suggested to promote industrial development. Proposed government initiatives include increased trade liberalization, discretionary government measures to stimulate industrial restructuring, and use of grants, subsidies and incentive programs to promote innovation and technological sovereignty, a strong review process of ensure that foreign direct investment results in significant benefit to Canadians, behaviour guidelines for foreign-owned subsidiaries, measures to expand exports, and adjustment assistance programs.

In a general sense, an industrial strategy consists of a set of policies and programs reflecting the co-ordination of government instruments and priorities concerning industrial policy and economic development. While Minister of Industry, Trade and Commerce, Jean Luc Pépin provided the following description:

> A strategy is an ensemble of co-ordinated objectives and instruments, i.e., policies, programs and institutions. Applied to industry, the term means the proper planning by government (federal) for the optimum co-ordination of policies and decisions, on the use of all productive resources, in order to achieve defined (and accepted) social and economic goals. The strategy must embrace all sectors of economic activity from resources to services but must emphasize manufacturing and processing.[5]

The Science Council has used a simpler definition:

> an integrated set of complementary measures embodying both strategic economic and industrial objectives.[6]

Because of its broad nature, an industrial strategy to promote industrial development can affect other areas of economic policy. The relationship between industrial strategy and both science and commercial policies is generally recognized in the literature. However, the relationship with competition policy has received little attention. Since the objectives and instruments of industrial strategy are likely to impact on market structure, conduct and performance, it is important to recognize this relationship and to assess the competition policy implications of specific policy and program recommendations.

This paper draws attention to the relationship between competition policy and industrial strategy, and the need to ensure that policies to alter the structure and performance of Canadian industries do not have adverse consequences on competitive conditions and efficiency in the domestic economy. Section 1 discusses the characteristics of the Canadian economy frequently addressed in the industrial strategy literature. Section 2 examines the role of competition policy and the relationship between competition policy and industrial strategy. Section 3 reviews some broad issues in the industrial strategy debate and briefly summarizes recommendations relating to areas of major concern. Section 4 examines implications of these proposals for the effectiveness and administration of Combines legislation. In general, it is hoped that this discussion will provide both policy makers and academics with a better understanding of the interface between competition policy and industrial strategy.

This paper is not intended to provide a comprehensive analysis of all issues relating to industrial strategy. While there is no question that the development prospects of the energy, agricultural and other primary product sectors are important to the Canadian economy, the following discussion deals primarily with secondary manufacturing. Focusing on this sector facilitates the discussion of several issues particularly relevant to competition policy, such as industrial restructuring and the impact of foreign competition. This also simplifies the review of the debate, since much of the industrial strategy literature focuses on the development of secondary manufacturing in Canada. Although some of the issues and comments discussed here are clearly applicable to other sectors, this paper does not deal directly with questions concerning the development and development prospects of these other industries.

Before discussing industrial strategy, it is useful to clarify the meaning of the term. In a broad sense industrial strategy involves strategic planning and government initiatives. In this paper, the term is defined more specifically to refer to a comprehensive and consistent set of polices and/or programs to stimulate structural change and to deal with market rigidities and/or market failures, for the purpose of improving the performance of the domestic economy and the international competitive position of Canadian secondary manufacturing.

SECTION 1: CHARACTERISTICS OF THE CANADIAN ECONOMY ADDRESSED IN PROPOSALS FOR AND INDUSTRIAL STRATEGY

Recommendations for an industrial strategy are based on the view that co-ordinated government policy initiatives are required to deal with conditions undermining the development potential of Canadian industry. Although proposed solutions often differ, there is common ground in the perception of problem areas and some underlying characteristics of the Canadian economy.

In general, studies dealing with industrial strategy demonstrate concern that Canada recorded a current account deficit for most years between 1950 and 1980, and that Canada tends to be an exporter of natural resources and importer of highly manufactured products.[7] In the literature this is linked to poor productivity performance in manufacturing. It is observed that the level of productivity in Canadian manufacturing is lower than in comparable American industries (see Table 1.1 in Appendix), although there is some evidence that the gap has been shrinking slowly (see Table 1.2 Appendix). In addition, there is concern that increased international competition in manufactured goods from recently industrialized nations will further erode Canada's international competitive position and increase the deficit.

These weaknesses have been attributed to a number of structural characteristics of the Canadian economy:

- Canada has a high average level of tariff protection on dutied goods, compared to other industrial nations;[8]

- the domestic market is small in relation to other major industrialized countries[9], and is geographically segmented, with transportation costs and provincial trade barriers reducing the mobility of factors, intermediary goods and final products;

- Canadian manufacturing industries tend to be more concentrated than similar American industries,[10] and Canadian firms tend to be large relative to the size of the domestic market, however, large Canadian firms are small by international standards;[11]

- unrealized plant economies are not a major problem, however Canadian plants tend to produce a greater number of products with shorter production runs, resulting in unrealized product specific economies of scale;[12]

- the incidence of foreign ownership in Canada is high relative to other countries (59% of non-government-owned manufacturing was foreign owned in 1975);[13]

- compared to other western industrialized nations, Canada has one of the lowest rates of R&D expenditures.

In general it is recognized that protection has dampened import competition and provided an environment in which high cost domestic firms can survive without being internationally competitive. Foreign tariffs reduce the access to foreign markets and undermine the realization of cost reductions due to high volumes of production and economies of scale.

In the literature, the poor cost competitive position of Canadian secondary manufacturing is also linked to the level and pattern of foreign direct investment. Foreign-owned firms are criticized for producing a wide range of product lines in Canada, primarily for domestic consumption. Further inefficiencies arise when subsidiaries employ technologies and production techniques used by the parent corporation, designed for larger scale operation. Foreign-owned firms are also criticized for being 'truncated' in terms of their range of activities.[14] Because they do not perform the full range of functions related to developing, producing and marketing, it is argued that this may result in fewer opportunities for innovation and entrepreneurship, fewer export sales, less Canadian production, less specialized product development and less spillover economic activity in Canada.

Technological innovation is emphasized in the literature because it can improve productivity and, therefore, trade performance. The development of distinctive Canadian products is also considered to be important to the improvement of export performance in secondary manufacturing. Those favouring the development of high technology industries argue that these sectors can overcome the constraints in Canadian cost competitiveness because potential foreign buyers will consider the special qualities of the products, and not just their price.

SECTION 2: THE RELATIONSHIP BETWEEN COMPETITION POLICY AND INDUSTRIAL STRATEGY

Both competition policy and industrial strategy are a part of the public economic policy framework. In general terms, Combines legislation provides the legal ground rules for conducting business. An industrial strategy consists of a broad, co-ordinated set of policies and/or programs aimed at the problems of structural adaptation and rigidities or market failures affecting the development of Canadian industry. Because the two policy areas are likely to overlap, they may be in conflict or mutually reinforcing. This means that both the objectives and the instruments of industrial strategy can have implications for the administration and effectiveness of competition policy.

Comparing the goals of these two policy areas indicates an important similarity. It is generally stated that industrial strategy proposals are aimed at promoting the efficiency and international competitiveness of Canadian industry. The prime objective of competition policy in Canada is to promote the efficient allocation and use of resources.[15] Competition itself is not the objective of competition policy; it is a means to an end. In the application of current and proposed Combines legislation, gains in efficiency override the structural test of reduced rivalry. This suggests that the objectives and administration of competition policy are directly relevant to the realization of the efficiency related goals of industrial strategy.

Combines legislation consists of laws of general application designed to:

> ... assist in maintaining effective competition as a prime stimulus to the achievement of maximum production, distribution and employment in a mixed system of public and private enterprise. To this end, the legislation seeks to eliminate certain practices in restraint of trade, and to overcome the bad effects of concentration, that tend to prevent the economic resources of Canada from being used most effectively to the advantage of all.[16]

Effective competition policy promotes better economic performance by removing artificial constraints in the market:

> For consumers, well functioning competitive markets bring about a wider choice of products of a better quality and at lower prices than would otherwise be available. For producers, there is an increased incentive to innovate, to compress costs and to be more efficient because the rewards of such conduct are available. For the nation as a whole, an effective competition policy will help to achieve a strong rate of economic growth and the maintenance of our position in the international economic community.[17]

To the extent that competition policy discourages restrictive trade practices and promotes efficiency, it contributes to the competitive pricing of inputs in the domestic market and the production of outputs that are internationally competitive. Competition policy also promotes dynamic adjustment in the Canadian economy, because of its role in the maintenance of the market forces that encourage adaptation and change. To the extent that competitive forces lead to efficient resource allocation, this reduces or removes the need for other control mechanisms.

Although the efficiency objectives of industrial strategy are consistent with Canadian competition policy, both the nature and application of the instruments of industrial strategy can have competition policy implications.[18] Structural policies that reduce rivalry, increase potential market power in Canada and contribute to restrictive trade practices, can have an adverse impact on efficiency in the domestic economy. To the extent that industrial strategy involves economic planning and the co-ordination of economic decisions, it relies less on the market system. As planning directs more decisions, the scope and significance of the market mechanism is reduced.

Where industrial strategy is aimed at the advancement of socio-political objectives, there may be some conflict or trade-off between these goals and efficiency related objectives. Similarly, to the exent that industrial policy choices are not consistenct with competitive solutions, based on efficiency in the use and allocation of resources, these choices may not coincide with the objectives of competition policy. In these cases, an effective industrial strategy must recognize and reconcile the potential conflict among strategic objectives. Assessing the competition policy implications of measures promoting socio-political goals and/or non-market solutions is an important part of developing a co-ordinated set of government priorities and policy instruments.

In general, the interrelationship that exists between competition policy and industrial strategy implies that there is both an opportunity and a need to co-ordinate these policy areas to ensure harmony and consistency. To determine the competition policy implications of industrial strategy proposals, it is necessary to assess strategies on a case by case basis. As a first step towards the development of a more integrated public economic policy framework, it is useful to examine the competition policy implications of broad approaches and selected issues in the industrial strategy debate.

SECTION 3: THE INDUSTRIAL STRATEGY DEBATE

A number of conceptual frameworks have been used to discuss industrial strategy issues and proposals.[19] For the purposes of this paper, it is useful to focus the analysis on the role of competition and the market vis-à-vis other forms of incentive and control. A review of the literature on industrial strategy indicates two broad orientations, based on distinctive choices in primary policy instruments. The debate arises from ideological differences and different assessments of why existing market conditions prevent or retard economic development. One approach favours market oriented solutions,[20] while the other favours increased direct government intervention.[21]

It should be noted that these broad orientations are not mutually exclusive. For example, some market oriented proposals recommend government involvement, particularly in the area of adjustment assistance. Those favouring increased government intervention also acknowledge the role of the market in some areas of the economy. In addition, there are dissenting views on both sides. It is clear that the development of an appropriate industrial strategy for Canada involves much more than the simple choice between these two broad approaches. However, this framework does highlight an important feature of the literature on industrial strategy, and is useful for reviewing the treatment of competition policy.

3.1: MARKET ORIENTED INDUSTRIAL STRATEGY PROPOSALS

Market oriented industrial strategy proposals reflect the doctrine that market forces are potentially effective and less expensive mechanisms for encouraging efficiency and dynamic adjustment than the alternatives. This approach favours the promotion of competitive market forces to stimulate and motivate the type of industrial adjustment required to achieve development objectives. Although some of these proposals include measures to supplement market forces in the promotion of desired social and economic goals, in general they emphasize the positive role of competition. It is argued that government action should be directed primarily at reducing constraints on the market and economic agents, rather than intervening directly in the decision-making process.

The Economic Council publication, Looking Outward, is a well known document favouring a market oriented approach. The views expressed in this influencial report provide a good representation of this side of the debate. Looking Outward argues that trade liberalization is well suited to dealing with the structural problems impeding industrial development. It is argued that greater import competition, plus expanded export market opportunities will induce Canadian manufacturers to become more efficient and internationally competitive. Although some government involvement is recommended to ease the burden of short-run adjustment costs, this approach relies primarily on competitive market forces.

The Looking Outward proposal acknowledges the importance of developing domestic technological capabilities and the potential export opportunities arising from developing technological-intensive industries. It recommends that efforts in this area be pursued more intensively. In addition, it suggests that the concept of technological innovation be widened to include all activities with a major component of educated labour, including product design, merchandising, business administration and the development of computer software.

Concerning procurement policies, it argues that although these policies may be used to assist Canadian industries in the development of innovations, precise guidelines and close surveillance are required to ensure that this assistance does not lead to a permanent dependence on government preferences and subsidies. It also recommends that the federal government take the initiative to establish a code for government procurement in Canada, and to formulate a multilateral agreement with the international community during GATT negotiations. If a multi-lateral arrangement cannot be agreed upon, it recommends that Canada negotiate reciprocal purchasing agreements with other countries.

Looking Outward includes several recommendations dealing specifically with competition policy. In general, this proposal draws upon the complimentary relationship between commercial and competition policy to promote efficiency and to protect the public interest. In the case of increased trade liberalization, it favours a more flexible approach to instruments of structural change and the direct use of import competition to maintain competitive market forces in cases where mergers or other forms of rationalization and specialization are required for domestic production to become internationally competitive.

In the case of industries not subject to much import competition, the Council recommends vigorous enforcement of competition policy to reduce the possibility of serious resource misallocation.

3.2: GOVERNMENT INTERVENTION ORIENTED INDUSTRIAL STRATEGY PROPOSALS

Government intervention oriented industrial strategy proposals reflect the view that market mechanisms and competition are unable to provide the basis for an effective industrial strategy because they operate too slowly, are impeded by rigidities or market failures and/or are associated with high social and economic costs of adjustment. For example, the use of increased trade liberalization as a major policy instrument is rejected, at this time, because of the magnitude of the adjustment problem foreseen in connection with this approach. Since existing market conditions will not automatically bring about the desired changes in efficiency and international competitiveness, it is argued that the government should assume a more active and direct role in stimulating and promoting industrial reorganization. This implies less reliance on market mechanisms and increased discretionary government incentives.

The specific recommendations presented in the influencial Science Council publication, The Weakest Link, are indicative of the interventionist approach to industrial strategy. In general it is argued that the domestic market be used as a base for developing efficient and export oriented manufacturers. This proposal focuses on the issues of foreign ownership and technological performance. Many of the specific recommendations are aimed at increasing the demand for, capacity and absorbtion of technology in Canada. For example, this strategy includes tax incentives and financial support for R&D, the use of procurement policies to expand domestic technological capabilities, the establishment of sectorally oriented technical centres and the regulation of imported technology. To increase Canadian control in manufacturing and to improve export performance, it recommends that the government encourage the establishment of internationally competitive "core" companies.[22] In the case of foreign owned subsidiaries, it recommends measures to stimulate greater specialization, more Canadian technological content and world product mandates.

The need to rationalize plants and product-lines to improve efficiency by capturing unrealized economies of scale, is also stressed in this proposal. Although it states that direct government involvement in the rationalization process usually can and should be avoided. It is recommended that the government encourage and facilitate private initiatives. These could include mergers, joint ventures and co-operative arrangements.

The Weakest Link includes only one brief reference concerning the relationship between competition policy and industrial strategy.[23] This suggests a lack of understanding of the role of rivalry and competition policy within the broad economic policy framework.

3.3 THE TREATMENT OF COMPETITION POLICY

A review of the industrial strategy debate indicates an uneven treatment of competition policy in the literature. In the case of those favouring a market oriented approach, published recommendations indicate some awareness of the relationship between industrial strategy and competition policy. For example, the Economic Council document explicitly recognizes the role of competition policy. To promote efficiency and to protect the public interest, it recommends effective Combines legislation and the use of foreign competition. In contrast, publications by those favouring an industrial strategy based on government intervention, place little emphasis on the role of competition policy and its relationship with industrial strategy.[24]

As indicated in Section 2, both the objectives and administration of competition policy in Canada are directly relevant to the efficiency goals of industrial strategy. Although the treatment of competition policy in the case of those supporting a market oriented approach to industrial strategy may be consistent with their view that competitive market forces can be used to resolve the structural problems impeding Canadian industrial development, competition policy is also important in the case of an industrial strategy based on increased government intervention. Since rationalization and specialization can lead to a high concentration of market power in the small domestic market,

there is a real danger that such market power can be used in a manner contrary to the public interest. Since restrictive trade practices and the abuse of market power can undermine the efficiency objectives of industrial strategy, there is continuous need to ensure that industrial reorganization does not have an adverse effect on the conduct and performance of Canadian manufacturing. Both approaches to industrial strategy require a mechanism of incentive and control to stimulate the realization of potential cost savings and to protect the public interest. If rivalry and competition policy do not perform this function, then other safeguard mechanisms must be used.

SECTION 4: THE COMPETITION POLICY IMPLICATIONS OF SELECTED ISSUES IN THE INDUSTRIAL STRATEGY DEBATE

The role of competition policy and the relationship between industrial strategy and competition policy indicates that there is a need to assess the competition policy implications of industrial strategy proposals. As a first step, it is useful to examine the competition policy implications of the broad approaches identified in the previous Section. The following discussion focuses on the issues of commercial policy and the rationalization of production, technology and innovation, and foreign ownership. Although this list is not exhaustive, these three issues are closely linked to key questions concerning efficiency and trade performance. They are also useful in highlighting to what extent the existing legislation and proposed amendments can protect the public interest under these two broad industrial strategy approaches.

4.1: COMMERCIAL POLICY AND THE RATIONALIZATION OF PRODUCTION

The rationalization of production accounts for an important part of the industrial strategy proposals presented by both the market oriented and government interventionist oriented supporters. In both cases it is argued that reorganizing production and expanding output will result in reduced unit costs due to the realization of unexploited economies of scale. In economic theory, classic economies of scale is a static concept, assuming a given state of technical knowledge. In a dynamic framework, the development and adoption of new product and process technologies is also important to unit costs. Both the static and dynamic concepts are included in the industrial strategy debate. To simplify the discussion, however, this Section will focus on the former concept. Questions relating to technology and innovation will be addressed in Section 4.2.

Canadian competition policy recognizes that the existence of a few large corporations may be the most efficient way of organizing production in some industries.

The administration of current and proposed Combines legislation is not aimed at establishing the type of atomistic competitive market structure corresponding to the 'perfect competition' model in economic theory. Instead, the concept of competition among sellers is interpreted as:

> a rivalry among sellers such that each is constrained by the efforts of the others, and by potential new rivals, to strive continuously to offer better terms to buyers. That concept contains no doctrinaire pronouncement about the number of firms required to assure adequate competition. In fact conditions of perfectly healthy competition are often encountered in quite highly concentrated markets. And the concept envisages the widest possible freedom of action for enterpreneurs in pursuit of their legitimate business interests.[25]

A review of the literature indicates that there is not much empirical evidence available concerning the existence and importance of plant-specific, product-specific or firm level economies of scale in Canada. As a result it is difficult to draw broad conclusions concerning the degree of domestic concentration that would lead to the exploitation of scale economies, and the cost penalty of suboptimal production.

In the case of plant-specific economies of scale, implications of the rationalization of production are linked to two important empirical questions:

a) Is the minimum optimum scale of production large or small compared to the relevant market for the output?

b) What is the cost disadvantage of operating at less than the optimal level?

Much of the available evidence is based on small samples or case studies.[26] Results show considerable variations in the importance of economies of scale among Canadian manufacturing industries (see Appendix, Table 1.3). This conclusion is supported by evidence based on larger studies for the United States and Britain.[27] Even if the measurement problems in these analyses are ignored,[28] evidence of unexploited plant economies in Canadian manufacturing must be considered in light of the out-bound transportation costs before it can be argued that this is a major source of potential cost savings.[29]

It is generally argued that increased specialization and longer production runs will lead to reduced unit costs arising from the realization of product-specific economies. Based on their analysis of 12 industries, Scherer et al. (1975) concluded that product-specific economies were more important than plant-specific economies. However, the empirical evidence relating to the importance of product economies is weak. Data limitations are the major problem in the analysis of this issue. Studies, such as Scherer's, are frequently based on small samples and rely heavily on comments made by businessmen or survey respondents.[30] Other analyses are based on simple comparisons of product diversification in Canadian and American plants.[31]

As already mentioned, the largest firms in Canada are often small relative to large firms in the United States. Such observations are frequently used to argue that Canadian firms have not been able to expand to capture firm level economies of scale. However, discussions of the advantages of large firm size fail to identify just how much larger a Canadian firm must be to realize these advantages. McFetridge and Weatherly (1977) have done a detailed empirical study of some potential sources of economies of large firms size. Their results provide no compelling evidence of systematic economies in marketing, finance and research, in the case of large firms.

Regression analysis, based on industry data, tends to show a significant and negative relationship between firm concentration and the extent of suboptimal capacity (i.e., the percentage of industry output produced in sub-optimal plants),[32] and, alternatively, a positive relationship between concentration and proxies for economies of scale.[33] At the same time, similar broad studies indicate some evidence of a positive and significant relationship between concentration and profits.[34] Although these analyses can be criticized for not separating the effects of plant-specific, product-specific and firm level economies, not controlling for subsector variations in the observed relationships and, not adequately taking into account the effects of import competition or export opportunities, the results support the claim that there is a potential policy dilemma between efficiency and the concentration of market power in the small domestic economy. Although economies of scale can lead to large firms and high domestic concentration, this can have adverse consequences on the efficiency of resource allocation in the domestic economy.

In general, available empirical evidence does not support broad statements concerning the existence and importance of unrealized economies of scale in Canadian secondary manufacturing. At the very most, there is some indication of potential economies in some sectors. However, the evidence does point to a policy dilemma between increased concentration and efficiency arising from the rationalization of production. Large firms may have a greater probability of exploiting economies of large scale production, but increased concentration can lead to market dominance, inefficient resource allocation as well as restrictive trade practices injurious to the public. This suggests that questions concerning potential market power and the rationalization of production should be assessed on a case- by-case basis.

It is often argued that competition policy should be flexible enough to permit the realization of potential efficiency gains arising from the rationalization of production.[35] This has long been consistent with the objectives and administration of competition policy in Canada. At the same time however, there must be safeguards to discourage restrictive trade practices, as well as the entrenchment and abuse of market power that benefits special interest groups and undermines the potential gains from restructuring.

The existing provisions on mergers and monopolies in the Combines Investigation Act are inadequate, and appear to be virtually unenforceable in the case of mergers. In an effort to resolve this problem, during the 1970's a number of attempts were made to modify competition policy, and to amend the Combines legislation. Bill C-256 was introduced into Parliament in June 1971. After the 1972 election it was decided that the reform of competition policy should proceed in two stages. The Stage I amendments to the Act came into effect at the beginning of 1976. The Stage II legislation, which includes measures dealing with mergers, monopoly and price discrimination, was initially introduced into Parliament in March 1977, as Bill C-42. In light of briefs from firms and trade associations, the proposals were redrafted and reintroduced into Parliament in November of that year, as Bill C-13. The proposed legislation incorporated the recommendations of two influencial reports: the Economic Councils' Interim Report on Competition Policy and the Skeoch- McDonald Report entitled Dynamic Change and Accountability in a Canadian Economy. However, Bill C-13 was never passed by Parliament. Current proposals[36] for revising the legislation focus primarily on reforming the laws in the areas of mergers, monopolies and conspiracies.

The amendments proposed in Bill C-13 aimed at resolving the potential conflict between effective competition and the objective of increased efficiency. Bill C-13 recognized that concentration is relatively high in Canada and that in certain industries the realization of economies of scale may lead to the existence of a small number of domestic firms. To strengthen the safeguards against the abuse of market power and to protect public interest, it was proposed that mergers be removed from the criminal law and treated under civil law. Bill C-13 also proposed the establishment of the Competition Board; a quasi-judicial tribunal empowered to review civil matters, including mergers.

Current proposed revisions to Combines legislation are aimed at allowing scope for mergers resulting in improved efficiency and potentially more competitive firms, but inhibiting mergers increasing domestic concentration with no offsetting gains in efficiency and reducing the competitive pressures on costs. Once again the revisions favour using civil law to deal with competition policy issues involving mergers, and it is and it is proposed that merger cases be subject to the jurisdiction and rights of appeal of the regular civil courts. It is also considered that the legislation should include a new provision requiring pre-notification in the case of a major merger resulting in the creation of a new company whose turnover or assets exceeds a certain ceiling.

Resolving this policy dilemma between potential market power and the rationalization of production is important to the realization of the goals of both industrial strategy and competition policy. To the extent that specific recommendations aimed at restructuring, affect competitive conditions, or contribute to the entrenchment and abuse of market power, they can have adverse consequences for the objectives of both of these policy areas.

It is important to recognize that the competition policy implications of the rationalization of production will be different under the two industrial strategies discussed above in Section 3. The market-oriented proposal for increased trade liberalization implies a greater reliance on the forces of foreign competition to promote efficiency in trading sectors under conditions of increased concentration of domestic market power. On the other hand, the industrial strategy proposal, based on increased government intervention and continued protection, implies an

increased burden on competition policy, to ensure that industrial restructuring and increased potential market power do not undermine the realization of lower unit costs. However, because of the weaknesses in existing merger and monopoly provisions, it will be difficult for existing legislation to meet this requirement.

The market-oriented industrial strategy proposal for increased trade liberalization is based on the premise that import competition both real and potential, associated with reduced trade barriers, would induce restructuring and increased efficiency. It is also argued that increased access to foreign markets would provide the incentive and opportunity to expand output to capture economies of scale. Some empirical evidence supports this argument. For example, in his analysis of structural adjustments in the auto industry following the establishment of the Canada-United States Autopact, Beigie (1970) found that product-specific economies of scale were realized as entire product lines were phased out in Canada. However, there is very little systematic empirical evidence of the interrelationship between trade, industrial structure and performance in Canada. Both the theoretical and empirical work done by Eastman and Stykolt (1960, 1964, 1967) suggested that the Canadian tariff has led to high prices and has enabled plants of less than optimal size to continue to operate in Canada. To date, the empirical support for this hypothesis is limited.[38] A later study by Daly and Globerman (1975) concluded that domestic and American tariffs were important factors influencing production efficiency and the internatinal competitive performance of Canadian manufacturing industries, but their analysis failed to control for other factors affecting trade. Although the empirical analyses by Baumann, (1976), Bloch (1974) and Caves (1980) make a positive contribution to the understanding of the interrelationship between trade and industrial organization, there are still many unanswered questions concerning the extent to which elements of market structure impact on trade performance, the impact of trade on domestic market structure and how effectively instruments of trade policy can be used to influence domestic market structure and performance.

Existing competition legislation recognizes the complementary relationship between commercial and competition policy. Tariff reductions are currently included under Section 28 of the Act as a remedy for the abuse of market power, although to date little use has been made of this provision. In general, a greater understanding of the relationship between trade and industrial organization in

Canada would provide a better indication of the opportunity for using trade policy to promote the objectives of competition policy and/or industrial strategy.

In some instances market forces may not produce the most efficient use of resources. With this in mind current and proposed Combines legislation include special exemptions. These provisions are particularly relevant to the goals of industrial strategy and recommendations for increased rationalization in production.

Both market-oriented and interventionist oriented industrial strategies recommend measures to promote exports. These include joint ventures and co-operation in the development and expansion of export markets. However, to the extent that these polices and/or programs impact on domestic competition, contribute to the entrenchment and abuse of market power, or facilitate restrictive trade practices, they can have adverse implications for competition policy. Once again there is a need to ensure that potential efficiency gains are realized and that there are safeguards to protect the public interest.

Export agreements have been exempt from prosecution under Section 32 of the Combines Act since 1960. The amendment was passed to encourage manufacturers to expand their exports and production. A number of safeguards were written into the legislation. For example, the exemption does not apply in circumstances where export arrangements would have negative effects on the domestic economy. Export agreements that actually reduce or limit the volume of exports, restrain or injure the export business of any domestic competitor, restrict anyone from entering into the business of exporting, or lessen competition unduly in the domestic market are excluded from this exemption. In this way, the legislation attempts to provide for the opportunities that could arise from export arrangements, while avoiding the potential negative consequences. The record shows that there has been little use made of this provision. Complaints in a number of business circles suggest that the existing export exemption is too narrowly defined. With this in mind Bill C-13 proposed a broader exemption for export agreements and included a provision stating that export agreements having an incidental but unintended effect on prices in the domestic market would not be disqualified from using subsection 32(4) of the Act.

Both sides of the debate recommend increased product specialization as a means for improving the competitive position of Canadian manufacturing. Canadian

producers tend to be aware of current technologies and the potential advantages of product specialization,[37] however the extent of product diversification observed in Canadian manufacturing indicates that there is insufficient incentive for increased specialization under current conditions. Although competition policy cannot actively encourage increased specialization, Bill C-13 proposed to exempt specialization agreements from the conspiracy provisions of the Act in cases where the likelihood of substantial efficiency gains is demonstrable. A specialization agreement is a temporary arrangement among firms to improve efficiency by each specializing in a narrower range of products to realize scale economies. Once again safeguards were included in the proposed amendments. Applications for specialization agreements would have been reviewed by the Competition Board. The Board would be empowered to decline approval, grant conditional approval or grant unconditional approval based on its assessment of the anti-competitive effect of the agreement. A time limit of five years was proposed, although where phased tariff reductions are a part of the conditions for approval, the agreement could be exempt from prosecution for up to ten years.

It should be noted that a number of comments and criticisms of the specialization agreement exemption have been raised.[39] For example, the rather arbitrary five-to-ten year time limit has been questioned. It has also been pointed out that there are measurement problems associated with demonstrating and assessing the potential gains in the efficiency of production likely to arise from the implementation of the agreement, as required by the proposal. In addition, this provision has been criticized by some because it implies a more discretionary role for competiton policy, in the process of industrial restructuring.

This discussion of commercial policy and the rationalization of production has indicated that there is little empirical evidence to support broad statements concerning the existence and importance of unrealized economies of scale in Canadian manufacturing. The evidence that is available indicates that questions concerning the rationalization of production should be dealt with on a case-by-case basis. The evidence also indicates that, in Canada, there is a dilemma between the concentration of domestic market power and efficiency. This dilemma has been a source of difficulty for the development of effective competition policy in Canada, and it is also relevant to the realization of the goals of industrial strategy. Policies and programs that contribute to the entrenchment and abuse of market power to the public detriment, can undermine the

objectives of both competition policy and industrial strategy. At the very least, safeguards are needed. The use of commerical policy as an industrial strategy tool reduces the burden on Canadian competition policy and is one way of dealing with the policy dilemma. However, industrial strategy proposals based on increased government intervention to stimulate and encourage restructuring, under conditions of continued protection, impose an increased burden on competition policy in Canada in attempting to ensure that policies to alter the structure and performance of Canadian industries do not have adverse consequences on competitive conditions and the efficiency of resource allocation in the domestic economy. The comments on the existing and proposed legislation relating to mergers and special exemptions indicates that competition policy in Canada is not a major obstacle to the rationalization of production and increased exports. This discussion also illustrates the opportunity for co-ordinating competition policy and industrial strategy.

4.2: TECHNOLOGY AND INNOVATION

The previous Section dealt with the static concept of economies of scale. As mentioned earlier, the development and adoption of new product and process technologies is also important to unit costs and the international competitiveness of Canadian secondary manufacturing. Both sides of the debate stress the importance of expanding domestic technological capacity and R&D in Canada, although the government interventionist oriented proposal places particular emphasis on this.

Innovation is an important dimension of competition. Canadian competition policy acknowledges the significance and potential benefits of technology and innovation. For example, co- operation in research and development is exempt from prosecution as conspiracy under Section 32 of the Act. However, this provision includes a number of safeguards. The arrangement cannot lessen competition unduly in terms of prices, quantity or quality of product, market or channels of distribution.

An examination of the recommendations included in the two broad orientations discussed in Section 3, indicates that the two approaches have different implications for competition policy. The market-oriented

approach tends to favour the broad application of general measures to stimulate innovation. In contrast, the interventionist proposal emphasizes the use of discretionary polices and programs aimed at expanding both the supply of, and the demand for, Canadian technology. These include the use of government purchasing policies, measures to promote the emergence of strong, competitive firms and Canadian "core" companies, and the regulation of imported technology. Policies of general application are less likely to have distorting effects that can undermine efficiency, and benefit special interest groups to the detriment of the public interest. On the other hand, discretionary polices frequently favour special interest groups, and can have adverse consequences for the conditons of both competition and efficiency in the domestic market.

The interventionist proposal argues that government purchasing power can be an important industrial strategy tool. However by restricting government purchases to "qualified" firms or extending preferential treatment to firms incorporating Canadian technology, this type of policy can have an adverse impact on competitive conditions and lead to market distortions. To the extent that government procurement policies contribute to the entrenchment of market power or to the occurrence of restrictive trade practices, they will have negative implications for competition policy. This type of policy can also give rise to non-price forms of competition, leading to an inefficient use of resources, and providing little assurance of the realization of the goals of industrial strategy. As a result, if this type of policy is to be used as a tool of industrial strategy, safeguards are required to ensure the benefits and reduce the possibility of negative consequences.

In the economic literature there are several schools of thought on the relationship between market power and technological change. One school argues that market power and large, monopolistic firms are conducive to innovation because they are able to support sizeable R&D facilities, they can pool risks, they are better able to implement new product and process technologies, and they are better able to fund R&D.[40] On the other hand, a second school argues that active competition and prospects for potential market power stimulate innovation. This is the rationale underlying the patent system that allows firms and individuals to capture the financial benefits arising from their inventions and innovations, at least temporarily.

As Scherer (1974) has pointed out, firms that are large, both in absolute terms and relative to specific markets, should be able to realize scale economies in

technological innovation. At the same time, however, security could also breed complacency, and a preference for the comfortable life. Based on his survey of studies investigating the relationship between firm size, concentration levels and measures of innovativeness,[41] he concludes that there is some evidence of scale advantages in research and innovation. However, these advantages tend to be fully realized at firm sizes and concentration levels well below the upper ranges of size and concentration in the U.S. He also concludes that there is no strong statistical relationship between concentration and innovation, once industry differences in technological opportunities are taken into account. A closer examination suggests that the connection between innovation activity and concentration is stronger in industries with limited technological opportunities and weakest in the case of industries with rich technological opportunities. The author also points out that the innovative contributions of smaller firms engaging in R&D are by no means negligible.

The Economic Council recently released the preliminary results of a study of 283 innovations reported by companies in five Canadian industries.[42] In collecting the data, firms were asked to report on innovations developed between 1960-1978, that were considered to have contributed most to their productivity. Comparing technological change in small and large firms, the study indicated that small firms tended to be product innovation oriented, while large firms were more process oriented. Small firm tended to opt for innovations with pay-back periods of less than three years, while the innovations of large firms tended to have longer pay-back periods. Concerning involvment in the process of R&D, although it was found that the average number of R&D scientists and engineers tended to increase with the size of the firm, and smaller firms tended to spend less per R&D scientist and engineer, small firms tended to be more R&D intensive (i.e., based on R&D spending per employee in the field). However, this observation applied only to Canadian-controlled firms. In the case of foreign-controlled firms no relationship between firm size and R&D intensity was observed. The study also found that large firms export significant proportions of their product innovations, although over 50 per cent of the innovations of small and medium-sized firms are exported also. In general, this suggests that measures favouring large firms over small and medium-sized firms may not only introduce market distortions, with adverse consequences for competition and efficiency in domestic markets, but they may also undermine the objectives of industrial strategy.

The interventionist proposal also recommends that technological imports be regulated to control the content and flow of technology into this country. It is interesting to note however that the evidence presented in the Economic Council study did not indicate an unbalanced reliance on imported technology.[42] In addition, if one of the goals of industrial strategy is to increase the level of innovation in Canada, domestic manufacturers need access to all sources of available technological information, in order to make sound decisions on investment, research and innovation. Japan's success with purchasing and adopting foreign technologies is well known. Similarly the case of Bombardier in Canada is considered to be a success story.[44] It is also important to avoid non-competitive duplication and product differentiation.

Detailed knowledge of technologies and patents and/orregulations restricting imported technology, can be the basis of market power in the domestic market. The problem of public policy is to balance the incentives and rewards which stimulate innovation, against the potential abuse of the market power acquired by the successful innovator. Once again some safeguards are necessary to protect the public interest. The possibility of abuse is recognized in the current Combines legislation. Under Section 29, the Federal Court is empowered to issue corrective orders when the exclusive rights and privileges granted by patents are used to prevent or lessen competition unduly. Bill C-13 proposed that the provisions dealing with intellectual property be broadened to include copyrights and industrial designs, since these can also be used to lessen competition.

This discussion of technology and innovation has emphasized the importance of assessing the impact that policies aimed at stimulating innovation can have on the competitive and efficiency conditions in the domestic market. The use of procurement policies, the promotion of "core" companies and restrictions on imported technology as tools of industrial strategy, can have adverse consequences. To the extent that they benefit special interest groups, facilitate the development and/or entrenchment of market power, or contribute to the occurrence of restrictive trade practices, these policies can have adverse implications for both competition policy and industrial strategy. It is also important to recognize the policy dilemma between the incentive stimulating innovation and the potential market power arising from successful innovations. This problem is implicitly acknowledged in existing and proposed Combines legislation, and it is relevant to industrial strategy.

4.3: FOREIGN OWNERSHIP

Although foreign direct investment has contributed to the development of an industrial economic base in this country, it is generally recognized that there are problems associated with the high degree of foreign ownership and control in some sectors. Within the industrial strategy debate there is considerable disagreement concerning the extent and relative importance of the negative effects of foreign direct investment. The Interventionists place particular emphasis on this, arguing that foreign ownership in secondary manufacturing is a major source of the rigidities and the failure in market mechanisms that are undermining the development, and development prospects, of this sector of the Canadian economy. For example, the thesis of The Weakest Link is that the Canadian economy is only semi-industrial and that this underdevelopment is a reflection of the high levels of foreign control.[45]

It is beyond the scope and purpose of this paper to deal with all of the questions and literature relating to the issue of foreign ownership, however a number of points are particularly relevant to this discussion.

The impact of foreign direct investment on the use and allocation of resources is important to the objectives of both competition policy and industrial strategy. Subsidiaries can affect the conditions of competition in the domestic market in a number of ways. For example, foreign multinationals are a significant source of market entrants. When compared to domestic firms, they are better able to overcome some barriers to entry.[46] On the other hand, foreign direct investment can transplant into the Canadian domestic market, patterns of oligopoly behavior non-price forms of competition and/or collusive agreements set up in other countries. In his analysis of multinationals in Canada, Caves (1980) found some evidence of anticompetitive behavior. For example, his results showed a relationship between advertising-based entry barriers and the profits of foreign subsidiaries.

Although the question of whether foreign owned firms have a net positive or negative impact on the use and allocation of resources is an empirical question, it is difficult to deduce the answer from available empirical information and analysis. In addition to the problem of

weighing the evidence of a positive effect against the evidence of a negative effect, a number of problems reduce the possibility of empirical analysis of key questions and weaken the conclusions of available studies. For example, it is difficult to obtain the necessary data and to control for other features of the Canadian economy that can impact on the conduct and performance of subsidiaries. Because of the pervasive influence of multinationals in the domestic economy, it is difficult to conclude what conditions would be like without foreign investment. In addition, there is considerable interindustry and intra-industry variation in the performance of foreign controlled firms. Therefore broad statements of the negative impact of foreign ownership lack strong empirical support.

The dilemma of weighing the costs and benefits of foreign direct investment is relevant to both competition policy and industrial strategy. Although available empirical evidence concerning the impact of foreign ownership leaves many questions unresolved, it does suggest that a flexible approach is appropriate. This type of approach is embodied in Canadian competition policy.

The current and proposed Combines legislation include a number of provisions dealing with multinational enterprises. Merger, monopoly and conspiracy provisions apply to both foreign-owned corporations and domestic controlled firms. Although the incidence of enforcement may lead to the more frequent prosecution of one group, the legislation does not apply a dual standard of performance. However, there are several provisions in the legislation that specifically address possible adverse consequences of foreign direct investment. Sections 31.5 and 31.6 of the exising Act deal with the extension of foreign judgments, laws and directives into Canada, via foreign controlled firms. In cases where these instructions would adversely affect efficiency or competition, production and/or foreign trade, without improving efficiency in Canada or resulting in some other compensating advantage, the Restrictive Trade Practices Commission can overrule foreign laws or directives, in whole or in part. Under Section 31.61, Bill C-13 proposed that the Competition Board have the authority to issue a prohibition order where it is proved that a multinational enterprise has restrictions affecting exports or imports of corporations operating in Canada, in cases where the restriction is designed to protect price levels either in this country or abroad. However no order can be issued under this proposed amendment, if the corporation does not account for 25 per cent or more of the production or supply of the product in Canada.

Once again the two industrial strategy proposals discussed in Section 2 of this paper have different implications for competition policy. The interventionist proposal places strong emphasis on government incentives to encourage and promote the establishment and expansion of Canadian controlled firms. Recommended policy instruments include favourable government procurement policies, the promotion of Canadian "core" companies and the strengthening of Canadian controlled companies by means of mergers, joint ventures and specialization. Programs based on the "key sector"[47] approach have also been suggested. As already stated, to the extent that these types of policies contribute to the entrenchment and the abuse of market power, and facilitate restrictive trade practices, they can have negative consequences for the objectives of both competition policy and industrial strategy. Policies favouring Canadian ownership do not ncessarily lead to efficiency in the use and allocation of resources. These policies may well have adverse consequences on other firms and/or sectors not favoured. Once again safeguards are needed to protect the public interest, in the shortrun and in the long run, from market behavior and performance primarily benefiting particular interest groups.

In general, the dilemma of weighing positive and negative effects of foreign investment is relevant to the objectives of industrial strategy, as well as competition policy. The current Combines legislation and the proposals in Bill C-13 recognize the need to assess the costs against the benefits, and provide some means for dealing with the problem of extraterritoriality and foreign directives restraining imports and exports of Canadian subsidiaries. Once again the objective and administration of Canadian competition policy is consistent with the goal of restructuring to improve efficiency and trade performance.

SECTION 5 CONCLUSIONS AND COMMENTS

The purpose of this paper is to draw attention to the role of competition policy in the public economic policy framework, and to provide a better understanding of the interface between competiton policy and industrial strategy. In general, the interrelationship between these two policy areas implies that there is both a need and opportunity for co-ordination, to ensure consistency and harmony.

In the review of the debate, two broad approaches to industrial strategy have been identified, one favouring market oriented solutions, and the other based on increased government intervention. In both cases the objectives and administration of Canadian competition policy are consistent with the goal of restructing to improve efficiency and trade performance. To be effective both approaches require incentive and control mechanisms to stimulate efficiency and to protect the public interest. If market forces and competition policy are not used, or if they are not strong enough to fulfil this role, then some other safeguard mechansims must be used.

The importance of not impeding or discouraging dynamic adjustment and economic development is reflected, to some extent, in the present legislation. Additional provisions were included in the amendments proposed in Bill C-13, particularly in the laws dealing with mergers, and special exemptions for export and specialization agreements. Current proposals for amending the Act are also aimed at providing scope for mergers resulting in improved and stronger, potentially more competitive firms, while inhibiting mergers that increase concentration, and harm the competitive environment, with no offsetting gains in efficiency.

This review of the debate, and some available empirical evidence, has also pointed out a number of policy problems relevant to both competiton policy and industrial strategy. In the case of the rationalizaton of production, there is potential conflict between increased concentration of power in the domestic market and efficiency in the allocation of resources. In the case of technology and innovation, there is a dilemma between the incentives that stimulate innovation, and the potential market power arising from successful innovations. In the case of foreign direct investment, there is a problem of assessing and weighing

tends to complement Canadian competition policy. On the other hand, the nature and the application of the discretionary policy instruments emphasized in the proposal based on increased government intervention, could be expected to place an increased burden on competition policy to discourage restrictive trade practices and the abuse of domestic market power. This is a major concern, since the present criminal provisions dealing with mergers are inadequate and virtually unenforceable in the case of mergers.

As mentioned earlier, this paper is not intended to provide a detailed treatment of all issues relating to industrial strategy. This discussion has focused on select issues relating to secondary manufacturing and unregulated industries. Although this is consistent with much of the industrial strategy literature, it is important to recognize that consideration of the development prospects of the energy, agricultural and other primary sectors, as well as the development implications of regulation, are also important to the formulation of an effective industrial strategy.

It should be noted that although resource sectors are not examined explicitly in this paper, many of the conclusions presented here are applicable. For example, it is also important to recognize and assess the competition policy implications of measures aimed at promoting efficiency and development in these sectors. The policy dilemmas between efficiency and the concentration of domestic market power, the incentive stimulating innovation and the market power arising from successful innovations, as well as the problem of assessing and weighing positive and negative effects of foreign direct investment, are also relevant to resource sectors. In general, the need and opportunity for co-ordinating industrial strategy and competition policy, are not limited to secondary manufacturing.

This examination of the interrelationship between industrial strategy and competition policy has suggested that the development of an integrated public policy framework requires the resolution of several key questions:

1) What are the appropriate instruments for industrial stragegy?

2) To what extent can competition policy promote efficiency in the domestic market?

3) To what extent would issues of economic development be part of competition policy, and to what extent should these issues be dealt with elsewhere in the economic policy framework?

So far, most of the debate has been centered around the first question, however the other two questions are directly linked to the formulation of an industrial strategy within the context of the public economic policy framework. Although it is not the object of this paper to provide answers to these questions, this discussion has indicated that the consideration of all three is important to the development of an effective industrial strategy.

FOOTNOTES

1. Economic Council (1975).

2. The Science Council has published at least 29 reports and 44 background studies concerning various science policy related issues. The most notable has been Britton and Gilmour (1978).

3. These include The Fraser Institute (see Palda (1979)), The Canadian Institute for Economic Policy (see Robinson (1980), Beale (1980), French (1980) and Shepherd (1980)).

4. See for example Canadian Manufacturers' Association (1980), Canadian Federation of Independent Business (1978), as well as statements by Rowland Frazee of the Royal Bank of Canada.

5. Excerpt from a speech made to the Annual General Meeting of the Canadian Manufacturers' Association in June, 1972, reproduced in French (1980).

6. Soience Council of Canada (1979).

7. See for example, Economic Council (1975) p. 22, Britton and Gilmour (1978) p. 33, and Robinson (1980) pp. 56-67.

8. See for example, Economic Council (1975) p. 10-11.

9. If gross national product is used as the basis for comparing relative domestic market sizes, then in 1979 the Canadian market was about one tenth the size of the American market, about three tenths the size of the Japanese market and about one half the size of the domestic market of France (at 1975 prices and exchange rates).

10. Rosenbluth (1954) found that in a sample of 56 comparable industries, Canadian concentration levels for 1948 were significantly higher than the 1947 levels in the United States in 50 of these industries.

11. For example, only four Canadian corporations were included in a list of the world's 100 largest financial corporations for 1975. These four were George Weston Ltd., Ford General Motors of Canada Ltd., and Imperial Oil. A further comparison of the largest 100 firms in Canada, in the United States and in the rest of the world (with size measured in terms of assets) indicates that on average, the largest Canadian firms are small relative to large corporations in the United States. (Royal Commission on Corporate Concentration (1978), p. 25.

12. Daly (1968) Wilkinson (1968), Caves (1975).

13. For each enterprise, the country of control was determined by majority ownership of the voting rights. See Report of the Royal Commission on Corporate Concentration (1978) p. 193.

14. The Gray Report (1971) defines a truncated firm as "...one which does not carry out all the functions from the original research required through to all the aspects of marketing - necessary for developing, producing and marketing its goods. One or more of these functions are carried out by the foreign parent of the Canadian firm." (p. 405).

15. Bertrand (1977).

16. Director of Investigation and Research (1980).

17. Bertrand (1977).

18. See De Gay Fortman (1966) for a general discussion of the interrelationship between competition policy and public economic policy. The author distinguishes between three types of policies, to demonstrate that the nature of policies may differ according to the part of the economy that is primarily affected:

    - policies affecting economic structure (including the promotion of research, rationalization, transportation policies, etc.);

    - policies affecting economic process (including fiscal and monetary policies, and economic planning);

    - policies affecting economic order (i.e. those dealing with the distribution and control of economic power).

19. See for example Breton (1974), French (1980), and Canadian Manufacturers' Association (1980).

20. For example, the Economic Council is a major proponent of a market oriented approach to improving industrial performance. The concensus document, Looking Outward (1975) recommended a policy framework based on trade liberalization. The Frazer Institute, favours private economic choice and private planning. The official objective of the Institute is to redirect "public

attention to the role of competitive markets in providing for the well being of Canadians". It is maintained that government initiatives should be aimed at restoring fiscal stability and ensuring a responsible monetary policy. The Institutes's direct involvement in the industrial strategy debate arises from Palda's (1979) critique of the Science Council's publication, The Weakest Link (1978). The Canadian Manufacturing Association (1980) favours an industrial strategy that maximizes the use of market mechanisms, with minimal government intervention.

21. The Gray Report (1972) recommended direct administrative intervention to deal with foreign controlled firms, along with some revisions to other public policies. It also argued that the benefits of these proposals would be enhanced if they were implemented within the framework of an industrial strategy. This would facilitate the use of administrative intervention to foster the development of Canadian controlled companies in industries, with strong growth prospects. It is suggested that although such an industrial strategy would likely require the maintenance of tariff protection, in some instances the government may wish to block foreign direct investment in a sector, but maintain competitive pressures by lowering trade barriers, The Science Council is a major proponent of an industrial strategy based on a strong element of government intervention (1979). Britton and Gilmour (1978) favour positive government intervention to stimulate the re-structuring of the manufacturing sector and to promote the expansion of domestic technological capabilities. Publications by Shepherd (1980), Beale (1980) and Robinson (1980), put out by the Canadian Institute for Economic Policy, also argue that problems facing the Canadian economy will not be self-correcting. Beale recommends the use of procurement policies, import substitution and export promotion to maximize the benefits of economic opportunities arising from the development of Canada's energy resources. Shepheard attempts to develop industrial policy framework based on the premise that positive government intervention is needed to strengthen the market system and entrepreneurship.

Table 1.1

Relative Productivity Levels
Canada/United States
1972

	Productivity[a]
Nondurable Goods	
I Food Processing	
Slaughtering and meat processing	
Dairy products	
Fish products	
Fruit and vegetable processing	
Biscuit manufacturers	
Baked products	
Soft Drinks	
Breweries	
Confectionery products	
II Textiles, Clothing, Knitting Mills	
Cotton yarn and cloth mills	
Woollen textile mills	116.74
Synthetic textile mills	72.80
Hosiery mills	
Other knitting mills	
Men's clothing manufacturers	91.98
III Paper Products	
Pulp and paper mills	79.59
Paper bag and box manufacturers	
Other paper converters	62.91
IV Petroleum Products	
Petroleum refining	89.93
V Miscellaneous	
Paint and varnish manufacturers	
Soap and cleaning products	
Tobacco products manufacturers	
Durable Goods	
VI Wood Products	
Sawmills, mach and door mills	
Veneer and plywood mills	
Household furniture	
VII Metal Products	
Iron and steel mills, steel pipe and tube	
Iron foundries	
Nonferrous metal or litho, et.	
Fabricating structural metals	
VIII Motor Vehicles	
Motor vehicles, parts and accessories	
Truck and bus bodies	
IX Miscellaneous	
Heating and air conditioning	90.65

[a] In this study productivity is measured as value added per man-hours worked. The author has attempted to adjust the values of production and materials to set out the impact of international price differences on measures of relative value added. These relative productivity estimates are in terms of Canadian prices.

Source: J.R. Frank, Assessing Trends in Canada's Competitive Position: The Case of Canada and the United States, Report to the Corporate Research Group, The Conference Board in Canada, (1977)

Table 1.2

Productivity[a] By Sector

Country and Sector[b]	Productivity growth	
	1963-73	1973-7.
Canada		
i) Government	1.0	-0.7
ii) Agriculture	3.[illegible]	[illegible]
iii) Industries	3.6	[illegible]
(Manufacturing)	4.6	[illegible]
iv) Commerce[b]	[illegible]	[illegible]
v) Other activities	[illegible]	[illegible]
Total economy	2.4	[illegible]
United States		
i) Government	[illegible]	[illegible]
ii) Agriculture	4.3	[illegible]
iii) Industries	[illegible]	[illegible]
(Manufacturing)	[illegible]	[illegible]
iv) Commerce	[illegible]	[illegible]
v) Other activities	[illegible]	[illegible]
Total economy	1.9	[illegible]
Japan		
i) Government	[illegible]	[illegible]
ii) Agriculture	[illegible]	[illegible]
iii) Industries	[illegible]	[illegible]
(Manufacturing)	[illegible]	[illegible]
iv) Commerce	[illegible]	[illegible]
v) Other activities	[illegible]	[illegible]
Total economy	[illegible]	[illegible]
Germany		
i) Government	[illegible]	[illegible]
ii) Agriculture	[illegible]	[illegible]
iii) Industries	[illegible]	[illegible]
(Manufacturing)	[illegible]	[illegible]
iv) Commerce	[illegible]	[illegible]
v) Other activities	[illegible]	[illegible]
Total economy	[illegible]	[illegible]
France		
i) Government	[illegible]	[illegible]
ii) Agriculture	[illegible]	[illegible]
iii) Industries	[illegible]	[illegible]
(Manufacturing)	[illegible]	[illegible]
iv) Commerce	[illegible]	[illegible]
v) Other activities	[illegible]	[illegible]
Total economy	[illegible]	[illegible]
United Kingdom		
i) Government	[illegible]	[illegible]
ii) Agriculture	[illegible]	[illegible]
iii) Industries	[illegible]	[illegible]
(Manufacturing)	[illegible]	[illegible]
iv) Commerce	[illegible]	[illegible]
v) Other activities	[illegible]	[illegible]
Total economy	[illegible]	[illegible]

a Average annual rates of growth

b "Agriculture" includes agriculture, hunting, forestry and fishing. "Industries" includes mining, manufacturing, electricity, gas, water and construction. "Commerce" includes wholesale and retail trade, restaurants and hotels.

c Including restaurants and hotels.

Source: OECD, Economic Outlook, July 1979.

Table 1.3

The Number of MOS Plants Compatible with Domestic Market Consumption[a]

Industry	Number of MOS plants compatible with domestic consumption	Actual number of plants	Percentage increase in unit costs for plants operating at one-third MOS[b]
Refrigerators and freezers	0.7	33	6.5
Cigarettes	1.3	21	2.2
Solid detergent	1.7	n.a.	3.8
Integrated steel	2.6	44	11.0
Sulphuric acid	2.7	n.a.	1.5
Breweries	2.9	48	5.0
Automobile storage batteries	4.6	24	4.6
Anti-friction bearings	5.9	n.a.	8.0
Petroleum refining	6.0	41	4.8
Paint and varnish	6.3	159	4.4
Portland cement	6.6	24	26.0
Glass bottles	7.2	n.a.	11.0
Cotton and synthetic broad-woven fabric	17.4	n.a.	7.6
Bricks	32.9	78	37.5
Bakeries	40.8	2,275	11.3
Non-rubber shoes	59.2	206	1.5

[a] Note these estimates correspond to 1967

[b] The Choice of one-third MOS is arbitrary

Source: P.K. Gorecki, Economies of Scale and Efficient Plant Size in Canadian Manufacturing Industries, Research Monograph Number 1, Research Branch, Bureau of Competition Policy, Consumer and Corporate Affairs (Ottawa, 1977), Tables 5.1 and 6.4

Report of the Royal Commission on Corporate Concentration (Ottawa, 1978), Table 3.2

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